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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,719	05/03/2005	Roy Van Dijk	NL 021094	7814

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER
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ABDIN, SHAHEDA A

ART UNIT	PAPER NUMBER
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2629

MAIL DATE	DELIVERY MODE
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07/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/533,719	Applicant(s) VAN DIJK, ROY	
	Examiner Shaheda A. Abdin	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/03/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Priority**

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### **Drawing**

2. The drawings are objected to Fig. 1 because it does not label the rectangular box as required by rule 1.83. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **Specification**

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### **Abstract**

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

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- (I) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Objections***

5. Claims 1-16 are objected to because of the following informalities: The use of parentheses in claims 1, 3-5, 12-16 are improper because the parentheses uses only for the reference characters (see MPEP 608.01(M)). Appropriate correction is required.

The use of dash lines (-) in the front of each line to claims 1, 10 should be avoided so as to simplify the claim format.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 8-9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Lisaka et al. (US. Patent No: 7084861 B2).

(1) Regarding claims 1 and 10:

Lisaka discloses in Fig. 1, a circuit for driving a display panel (liquid display panel, 101a) that comprises a matrix of pixels (110), the matrix comprising a plurality of rows (x) and columns (y), the circuit comprising:

an input (inputted pixel data in conversion circuit 300) for receiving an input signal (D0-D7) comprising pixel values (gradation value,  $2^8$ ) for the plurality of rows (x) in a frame to be displayed by at least some of the pixel (110), each pixel value determining a light output (Ds) of a pixel (101a) (column 18, lines 51-62, column 21, lines 1-15, fig. 1)

a memory (field memory) for storing the received pixel values (column 21, lines 12-13); processing circuitry (200-300) for analyzing the pixel values in each of the plurality of rows (x) and for generating a row timing signal (row timing signal generating through timing production circuit, 200) for addressing a subset of the plurality of rows (x) for substantially a duration of a row time (selected frame period) being a time period for addressing a row (see column 21, lines 1-17) (note that the output, Ds, for the pixels of one row which correspond to the intersections with the first scanning line 112 from above in FIG. 1 are point-sequentially latched by the first latch circuit 1420, in fig. 4. i.e. data conversion circuit 300 sequentially produces the binary signals Ds corresponding to the individual subfields, from the gradation data D0 D7 of the respective pixels, and

then outputs the produced signals, in conformity with the timings of the latches of the first latch circuit 1420) (column 23, lines 4-17),

a video output (output at 300) for supplying an output signal (Ds) comprising output pixel values (brightness of pixel) to pixels (101a) in the subset of rows (Subfields Sf1-Sf255 of row X ) being addressed, wherein the processing circuitry (300) is arranged to determine each row time ( time between two start pulse Dy, see fig. 5) in dependence on at least one pixel value (brightness of pixel) from among the pixel values for the subset of rows (X) being addressed during that row time (time between two start pulse Dy). Column 21, lines 10-17).

(2) Regarding claim 8:

Lisaka teaches to generate via the video output the output signal (Ds) corresponding to an amplitude (frequency ) of a signal to be supplied to a pixel (110) (see Fig. 5, s1-s3 and Ds and also see column 34, lines 5-10).

(3) Regarding claim 9:

Lisaka teaches a display panel (101 a) that comprises a matrix of pixels (110), which matrix comprises a plurality of rows (X) and at least one column (Y) (column 16, lines 60- 67, column 17, lines 1-10, and fig. 1).

### **Claim Rejections - 35 USC § 103**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lisaka in view of Singhal et al. (US patent No: 6057809, see the IDS).

(1) Regarding claim 2:

Lisaka teaches the circuitry (300) is arranged to determine the row times (Ts) such that all of the subsets (subfield) of rows (X) in a frame (in a field) are addressed within a frame time (frame period), being a time period for addressing the plurality of rows (X) in the frame (field), and Lisaka does not teach the frame time remains substantially constant over a number of consecutive frames.

However, Singhal in the same field of endeavor teaches that the frame time (frame period) remains substantially constant over a number of consecutive frames (column 7, lines 52-58).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a method that the frame time remains substantially constant over a number of consecutive frames as taught by Singhal into the driving system of Lisaka so that the addressing time of the plurality of rows in the frame would be substantially constant over a number of consecutive frames. In this configuration the system would have higher quality image with brighter pixel (column 7, lines 42-50).

(2) Regarding claim 3:

Singhal teaches that the value of each row time is in dependence on a maximum value (maximum brightness) from among the pixel values for the subset of rows (subframe)(column 6, lines 42-64, and fig. 6).



(3) Regarding claim 4:

Lisaka teaches the circuitry (300) is arranged to supply via the video output the output pixel values (Ds) in the form of a pulse-width modulated signal (alternation signals (00000001-11111111), see in Fig. 7) (column 21, lines 30-31, column 23 lines 33-62)

(4) Regarding claim 5:

Lisaka teaches the processing circuitry (300) comprising a sub-circuit (150, clock generating circuit) for generating a clock signal (CLK) having a clock period (time between H, (on signal) and L,(off signal)), each pulse width in the pulse-width modulated signal being a number of the clock periods (note that in fig 7, shows that each pulse width modulated signal has a number of clock signal, i.e. time between rising and falling signals) , wherein the circuitry (300) is arranged to determine the clock period (interval) for each frame by dividing the frame time (Ts) by a sum (256) of the maximum pixel values (column 18, lines 40-56).

(5) Regarding claim 7;

Singhal in the same endeavor teaches a value determined by averaging clock periods (pixel is on) determined for a number of consecutive frames (frame 1, frame 2, frame 3, frame 4) (column 6, lines 35-50).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lisaka in view of Singhal as applied to claim 4 above, and further in view of Funke et al. (US Pub: No: 2002/0093462)

Regarding claim 6:

Lisaka teaches the circuitry (300) comprising a sub-circuit (150) for generating a clock signal (Clk) having a clock period (count value by the counter), each pulse width in the pulse-width modulated signal being a number of the clock periods (time between H and L signal) (column 18, lines 40-56), wherein the circuitry (300) is arranged to determine the sum (256) of the maximum pixel values, but Lisaka does not teach , and a look-up table of possible clock periods.

However Funke in the same endeavor teaches a look-up table (65) of possible clock periods ([0018], fig. 2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a look up table (65) as taught by Funke into the driving system of Lisaka as modified by Shinghal so that the clock period can be selected from the lookup table on the basis of the sum calculated. In this configuration the system will have higher quality picture with optimum resolution (Funke, [0007]).

### **Conclusion**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoki (US PU. No: 6831622) discloses a circuit and method for driving electro-optical panel, electro-optical device, and electronic equipment.

**Inquiry**

12. Any inquiry concerning this communication should be directed to the examiner at (571) 270-1673 Monday- Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen, can be reached at (571) 272-7772.

Information regarding the status on an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9799 (IN USA OR CANADA) or 571-272-1000.

**Any response to this action should be mailed to:**


Commissioner of patents and trademarks  
Washington, D.C. 20231

**Or fax to:**

**(703)872-9314 (for Technology Center 2600 only)**

Shaheda Abdin

07/15/2007

  
**CHANH D. NGUYEN**  
**SUPERVISORY PATENT EXAMINER**

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